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10/579,093

05/12/2006

Koichi Sato

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8934

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7590

03/13/2009

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EXAMINER

SIDDIQUE, OMAR F

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

03/13/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/579,093 | Applicant(s) SATO ET AL. | |
| | Examiner OMAR SIDDIQUE | Art Unit 1791 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 10-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/12/2006 and 9/19/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-9, drawn to a process for producing a 3-d structured material.

Group II, claim(s) 10, drawn to an apparatus for producing a 3-d structured material.

Group III, claim(s) 11-13 drawn to a liquid composition for producing 3-d structured materials.

Group IV, claim(s) 14 drawn to a 3-d structured product.

2. The inventions listed as Groups I-IV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The technical feature common to Groups I - IV is **the application of a stimulus to a liquid composition comprising: block polymer, and liquid medium to form a three dimensional structure**. This cannot be a special technical feature under PCT Rule 13.2, because this technical feature is known in the prior art.

Kabushiki et al. EP Patent No. 1,243,624 discloses a stimuli-responsive composition which contains a polymer and solvent, where the solvent is water (page 2, paragraph [0004]). The polymer is disclosed as a block polymer, which changes its properties by stimulation (paragraph [0006]).

Therefore, a holding that these four groups do not have a single inventive concept is proper.

3. During a telephone conversation with Attorney Paul Saxon on March 9th, 2009 a provisional election was made with traverse to prosecute the invention of group I, claims 1-9.

Affirmation of this election must be made by applicant in replying to this Office action. Claims

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10-14 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Kabushiki EP Patent No. 1,243, 624.

With regard to claim 1, Kabushiki et al. EP Patent No. 1,243,624 discloses a stimuli-responsive composition which contains a polymer and solvent, where the solvent is water (page 2, paragraph [0004]). The polymer is disclosed as a block polymer, which changes its properties by stimulation (paragraph [0006]).

With regard to claim 2, Kabushiki teaches the composition as being used in the formation of lipstick (solid), therefore the process of making lipstick would inherently provide (post modification) solidifying step (page 4, paragraph [0026]). Furthermore, Kabushiki teaches the result of phase transition when temperature change is used as the stimuli. Kabushiki teaches liquid crystallization, a known solidifying step (page 7, paragraph [0046]).

With regard to claim 3, Kabushiki teaches the block polymer as being amphiphillic, thereby forming micelles (page 3, paragraph [0016]).

With regard to claim 4, Kabushiki teaches the stimulation as temperature change, pH change, exposure to electromagnetic wave, and concentration change (page 2, paragraph [0006]).

With regard to claim 5, Kabushiki teaches an apparatus which has a means for applying thermal energy to the ink (stimulus) thereby ejecting the ink onto a recording medium to form an image (page 3, paragraph [0015]).

With regard to claim 6, Kabushiki teaches a predetermined functional substance which contains an additive capable of cross linking with the block polymer (page 3, paragraph [0010]).

With regard to claims 7 and 8, Kabushiki teaches the predetermined functional substance as a pigment (coloring material: page 2, paragraph [0004]).

With regard to claim 9, the applicant describes the structure of his polyalkenyl ether block polymer as a copolymer composed of polyvinyl ether and another polymer.

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Kabushiki teaches the same structure, with a polyvinyl ether structure as the repeating unit and another functional group (polymer) (page 9, paragraph [0061]).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMAR SIDDIQUE whose telephone number is (571)270-5515. The examiner can normally be reached on Monday-Friday 9AM-5AM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 1-571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/OMAR SIDDIQUE/
Examiner, Art Unit 1791
/ Carlos Lopez/

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Primary Examiner, Art Unit 1791